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37. (Amended) An isolated polypeptide comprising an amino acid sequence is selected from the group consisting of SEQ ID NO: 2 and 4.

REMARKS

Claims 25-37 are pending in the case.

Rejection Under 35 U.S.C. §112

Claims 25-35 stand rejected under section 112 (second paragraph) as being indefinite because of use of a recitation of an amino acid sequence at least 75% identical to sequences contained in the sequence listing and differing only in conservative amino acid substitutions.

In response, Applicants have amended claim 25 (and claims dependent on it) to recite that the claimed polypeptide is one that, if contacted with an antibody that binds Sp36 protein (SEQ ID NO.: 7 and Figure 2), would bind to said antibody. The test for such cross-reactivity is provided in the application at Example 4 (page 30). Thus, the amendment makes clear that the polypeptides within the claim are those that meet this claim limitation.

Claims 26 – 27 were rejected for being dependent from claim 25. Claims 26 and 27 have been amended for clarification and antecedent basis from claim 25.

Claim 28 has been rejected on grounds similar to claim 25. In response, claim 28 has been amended to recite a limitation similar to claim 25 so that the claimed polypeptide cross-reacts with an antibody that binds to Sp36 protein.

Claims 29 and 30 depend from claim 28 and thus recite this new limitation.

The Office Action also questions whether the stretches of amino acids to be compared are contiguous. Applicants respond that the definition of "percent identity" within the application (starting at page 10, line 12) clearly indicates that the sequence alignments permit gaps in the sequences and clearly defines how to account for such gaps in calculating percent identity. The Examiner is invited to review the alignment of SEQ ID NO: 2 and 6 with the sequence of Sp36 polypeptide provided in Figure 2 and compare this with the sequence identities summarized in Table 1 at page 31 of the application.

The new claim limitation also indicates that polypeptides within the claim have the desired activity by requiring that the polypeptide reacts with an anti-pneumococcal Sp36 antibody (supported at Example 4 of the application at page 30).

Claim 33 was rejected based on a necessary comparison with Sp36. Applicants respond that the sequence of Sp36 is contained in Figure 2 of the application, where it is aligned with SEQ ID NO: 2 and 6, respectively. In addition, in response to a request from the Patent Office (Paper No. 4), a new sequence listing was earlier submitted in this case which contained the sequence of Sp36 as SEQ ID NO: 7. (see the amendment of 28 February 2001).

In view of these amendments, these claims are believed to be more definite and to fulfill the requirements of section 112, second paragraph, by better describing the claimed invention.

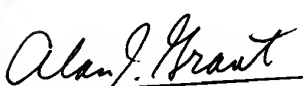
Rejection Under 35 U.S.C. §102/103

Claims 31-32 have been rejected under section 102(a) based on the Spellerberg et al reference and claims 31, 32 and 37 have been rejected over Spellerberg in view of


Bentle. Applicant has cancelled claims 31-32 from the application and has amended claim 37 to remove reference to SEQ ID NO: 6.

In view of these amendments, Applicants believe that this ground of rejection has been avoided.

Fees for a three month extension of time to respond and for the accompanying Notice of Appeal are included herewith. The Commissioner is requested to charge any additional fees, or credit any refunds, to Deposit Acc't No. 03-0678.

EXPRESS MAIL CERTIFICATE	
Express Mail Label No. EF010575959US	
Deposit Date: 22 May 2002	
I hereby certify that this paper and the attachments hereto are being deposited today with the U.S. Postal Service "Express Mail Post Office To Addressee" service under 37 CFR 1.10 on the date indicated above addressed to:	
BOX AF Commissioner for Patents Washington, DC 20231	
 Alan J. Grant, Esq.	<u>5/22/02</u> Date

Respectfully submitted,



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AMENDED CLAIMS

25. (Amended) An isolated polypeptide comprising ~~a polypeptide whose~~ an amino acid sequence is at least 75% identical to the sequence of SEQ ID NO: 4 and ~~wherein said percent identity differs only by conservative amino acid substitutions~~ wherein said polypeptide reacts with an anti-pneumococcal Sp36 antibody.

26. (Amended) The isolated polypeptide of claim 25 wherein said ~~polypeptide~~ amino acid sequence is at least 90% identical to the sequence of SEQ ID NO: 4.

27. (Amended) The isolated polypeptide of claim 25 wherein said ~~polypeptide~~ amino acid sequence is at least 95% identical to the sequence of SEQ ID NO: 4.

28. (Amended) An isolated polypeptide comprising ~~a polypeptide whose~~ an amino acid sequence is at least 75% identical to a sequence selected from the group consisting of SEQ ID NO: 2 and 4 wherein said polypeptide is present in an organism selected from the group consisting of Group A streptococci and *Staphylococcus aureus* and wherein said polypeptide reacts with an anti-pneumococcal Sp36 antibody.

33. (Amended) An isolated polypeptide comprising an amino acid sequence at least 75% identical to a sequence selected from the group consisting of SEQ ID NO: ~~2, 4~~ 2 and 4, and wherein said polypeptide has a sequence at least 25% identical to the amino acid sequence of the Sp36 protein of *Streptococcus pneumoniae*.

34. (Amended) The isolated polypeptide of claim 33 wherein said ~~polypeptide~~ amino acid sequence is at least 90% identical to the sequence ~~selected from the group~~ consisting of SEQ ID NO: 2, 4 and 6 2.

35. (Amended) The isolated polypeptide of claim 33 wherein said polypeptide is at least 95% identical to the sequence selected from the group consisting of SEQ ID NO: ~~2, 4 and 6~~ 2.

36. (Amended) The isolated polypeptide of claim 33 wherein said polypeptide comprises a sequence selected from the group consisting of SEQ ID NO: ~~2, 4 and 6~~ 2.

37. (Amended) An isolated polypeptide comprising ~~a polypeptide whose~~ an amino acid sequence is selected from the group consisting of SEQ ID NO: ~~2, 4 and 6~~ 2 and 4.